Evaluating Massachusetts' Adverse Event Reporting System (MARS)

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Aim 1: Objective

- Enhance the system of mandatory reporting of serious adverse events by acute care hospitals in Massachusetts
  - Increase reporting
  - Streamline data collection and analysis
  - Enhance systematic feedback to facilities and public

Reportable Incidents

- *Hospitals must report fire, suicide, serious criminal acts, pending or actual strike, serious physical injury resulting from accident or unknown cause, and other serious incidents that seriously affect the health and safety of patients (105 CMR 130.331)*

http://www.mass.gov/dph/dhcq/cicletter/cir1298.htm

MARS Serious Incident Types: 2001

- A1 Abuse Physical
- A2 Abuse Verbal
- A3 Abuse Sexual
- A4 Abuse Resident to Resident – Physical
- A5 Abuse Resident to Resident – Sexual
- A6 Abuse Resident to Resident – Verbal
- A7 Abuse by Visitor/Other Physical
- A8 Abuse by Visitor/Other Sexual
- A9 Abuse by Visitor/Other Verbal
- AA Administration (policies, rules, visits, ect.)
- AB Advocacy Office Violation
- B1 Blood and Transfusion Services
- C1 Chocking Incident
- C2 Criminal Act Drug Division
- C3 Criminal Act Bomb Threat
- C4 Criminal Act Other
- D1 Death
- E1 Emergency Care Hospital Dumping
- E2 Emergency Care Delays in Care/Access
- E3 Emergency Care Quality of Emergency Medical Treatment Services
- E4 Emergency Care Psychiatric Services
- E5 Epid. Disease Food Poisoning
- E6 Epid. Disease Staph Infection
- E7 Epid. Disease Shingles
- E8 Epid. Disease Scabies
- E9 Epid. Disease Influenza
- EA Epid. Disease Hepatitis
- EB Epid. Disease Salmonellosis
- EC Epid. Disease Tuberculosis
- ED Epid. Disease Other (measles, mumps, chicken pox etc.)
- EE Equipment Malfunction
- F1 Fall Fracture
- F2 Fall Laceration
- F3 Fall Other
- F4 Fire Accidental
- F5 Fire Suspicious
- F6 Fire Unknown
- F7 Fraud/False Billing
- F8 Fire in OR
- H1 Other Harm to Staff/Visitor/Other
- H2 HHA – Reduction in Services/Balanced Budget Act
- I1 Infection Control
- I2 Injury Aspiration
- I6 Injury Electrocution
- I7 Injury Poisoning
- I8 Injury Staff/Visitor
- I9 Injury Other
- L1 Laboratory Regulatory Violation
- L2 Lack of Dental Services/Staff
- L3 Lack of Dietary Services Staff
- L4 Lack of Home Health Aide Services/Staff
- L5 Lack of Laboratory Services/Staff
- L6 Lack of Medical Services/Staff
- L7 Lack of Nursing Services/Staff
- L8 Lack of Professional or Technical Services/Staff
- L9 Lack of Psychiatric Services/Staff
- LA Lack of Radiological Services/Staff
- LB Lack of Rehabilitation Services/Staff
- LC Lack of Respiratory Services/Staff
- LD Lack of Social Services Staff
- LE Local Laws Violation

NQF Never Events* (2002)

	# Types
A. Surgical and procedural events	5
B. Product or device events	3
C. Patient protection events	3
D. Care management events	7
E. Other serious patient-specific events	5
F. Environmental events	4
TOTAL	27

*Adapted from National Quality Forum, 2002

Streamlined, Standardized List of Reportable Events

- Advantages
  - Increase clarity for reporters about which incidents to report
  - Increase consistency of incident analysis
  - Define corrective actions for each incident
  - Enable “between-state” comparisons
- Disadvantages
  - Existing systems may have to revise approach
  - State regulatory authorities may require reporting of incidents not on NQF list

Impact of NQF Standard on Existing Statewide Systems?

- Describe the "epidemiology" of previously reported incidents (1999-2004)
  - Incident characteristics
  - Patient characteristics
  - Contributing factors
  - Corrective actions
- Assess prevalence of NQF never-events
- Compare to incidents reported in other states

Sample and Data Collection: DPH Serious Incidents 1999-2004

- Goal: stratified, random sample of 800 reports
  - Oversample 2003-2004 (n=400)
- Exclude
  - Consumer-reported incidents
  - Long-term care facility reports
- Data collection
  - On-site abstraction of reports
  - 2 abstractors
  - Review complete records for each report (including electronic and paper files)

Report ≠ Patient Incident

	1999-2004
	%
Incident occurred at facility other than reporting facility	2.4
No patient involved	4.3
More than one patient involved	4.0

secIqA8 and secIqA10

Patient Characteristics*

	1999-2004
Age in years	**%**
0 – 18	6
19 – 50	16
51 – 65	10
> 65	67
Female	60
Race/ethnicity reported	1

***Among reports involving a single patient and incident**

secIqB1, secIqB2 and secIqB3

Severity of Injury

	1999-2004
	%
None or insignificant	0.4
Significant	21
Serious	58
Fatal or life threatening	20

secIIqB3 and secIIqA

Types of Serious Incident Reports (Using NQF Categories)*

	1999-2004 N=762
	%
A. Surgical and procedural events	12
B. Product or device events	1
C. Patient protection events	52
D. Care management events	7
E. Other serious patient-specific events	23
F. Environmental events	4

*Defined by National Quality Forum, 2002

Handling of Reports

	1999-2004
	%
Received and filed without investigation	63
On-site investigation by DPH	16
Off-site investigation by DPH	12
Other*	10

***awaiting additional info, defer until next survey, refer to EOEA Ombudsman, refer to another agency, recent survey, duplicate report, administratively closed, refer to HCFA, monitoring visit**

"logas" variable

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Contributing Factors*

	1999-2004
	%
Admitted or discharged within 24 hours of incident	32
Transfer between locations within facility at time of incident	16
Delay in diagnosis or treatment	5
Delay in transport or transfer	1

*Adapted from Vincent

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Contributing Factors*

	1999-2004
	%
Problems with equipment	6.9
One or more staff new to unit	2.6
Temporary employee involved	1.7
Mismatch of staffing and workload	1.8

*Adapted from Vincent

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Corrective Actions

	1999-2004
	%
Corrective actions included by hospital	41
DPH staff recommend corrective actions	5

secIVqA2 and secIVqB2

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% of DPH Incidents that are NQF "Never Events"

Incident Category	% of Incidents In DPH Study Sample N=762	% in Category that fulfill NQF Incident Criteria N=114
	%	%
All Incidents	100	8
A. Surgical and procedural events	12	28
B. Product or device events	1	23
C. Patient protection events	52	0.7
D. Care management events	7	62
E. Other serious patient-specific events	23	0.3
F. Environmental events	4	0

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Prevalence of NQF "Never Events" in Current Database

Incident Category	MA 1999-2004	MN 2003-2004
	N=114	N=99
	%	
A. Surgical and procedural events	40	52
B. Product or device events	3	4
C. Patient protection events	4	2
D. Care management events	52	31
E. Other serious patient-specific events	1	1
F. Environmental events	0	9

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Conclusions

- Large number of reported incidents…
  - Lack information about contributing factors
  - Lack mention of corrective actions
  - Do not lead to further investigation
  - Do not fit the current “NQF Never Event” criteria
- Potential under-reporting of “NQF never events” by Massachusetts hospitals
- Massachusetts hospitals report serious incidents that might be included as “NQF never events”